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U.S. Department of Justice

Immigration and Naturalization Service

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OFFICE OF ADMINISTRATIVE APPEALS  
425 Eye Street N.W.  
ULLB, 3rd Floor  
Washington, D.C. 20536

File: [REDACTED] Office: Texas Service Center

Date: FEB - 4 - 2003

IN RE: Petitioner:  
Beneficiary: [REDACTED]

Petition: Immigrant Petition for Alien Worker as an Outstanding Professor or Researcher pursuant to Section 203(b)(1)(B) of the Immigration and Nationality Act, 8 U.S.C. 1153(b)(1)(B)

IN BEHALF OF PETITIONER:

[REDACTED]

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INSTRUCTIONS:

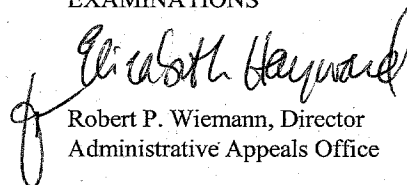
This is the decision in your case. All documents have been returned to the office that originally decided your case. Any further inquiry must be made to that office.

If you believe the law was inappropriately applied or the analysis used in reaching the decision was inconsistent with the information provided or with precedent decisions, you may file a motion to reconsider. Such a motion must state the reasons for reconsideration and be supported by any pertinent precedent decisions. Any motion to reconsider must be filed within 30 days of the decision that the motion seeks to reconsider, as required under 8 C.F.R. 103.5(a)(1)(i).

If you have new or additional information that you wish to have considered, you may file a motion to reopen. Such a motion must state the new facts to be proved at the reopened proceeding and be supported by affidavits or other documentary evidence. Any motion to reopen must be filed within 30 days of the decision that the motion seeks to reopen, except that failure to file before this period expires may be excused in the discretion of the Service where it is demonstrated that the delay was reasonable and beyond the control of the applicant or petitioner. *Id.*

Any motion must be filed with the office that originally decided your case along with a fee of \$110 as required under 8 C.F.R. 103.7.

FOR THE ASSOCIATE COMMISSIONER,  
EXAMINATIONS

  
Robert P. Wiemann, Director  
Administrative Appeals Office

**DISCUSSION:** The employment-based immigrant visa petition was denied by the Director, Texas Service Center, and is now before the Associate Commissioner for Examinations on appeal. The appeal will be dismissed.

The petitioner is a software development business. It seeks to classify the beneficiary as an outstanding researcher pursuant to section 203(b)(1)(B) of the Immigration and Nationality Act (the Act), 8 U.S.C. 1153(b)(1)(B). The petitioner seeks to employ the beneficiary permanently in the United States as an applications engineer. The director determined that the petitioner had not established that the beneficiary is recognized internationally as outstanding in the academic field of the offered position, as required for classification as an outstanding researcher.

Section 203(b) of the Act states, in pertinent part, that:

(1) Priority Workers. -- Visas shall first be made available . . . to qualified immigrants who are aliens described in any of the following subparagraphs (A) through (C):

(B) Outstanding Professors and Researchers. -- An alien is described in this subparagraph if --

(i) the alien is recognized internationally as outstanding in a specific academic area,

(ii) the alien has at least 3 years of experience in teaching or research in the academic area, and

(iii) the alien seeks to enter the United States --

(I) for a tenured position (or tenure-track position) within a university or institution of higher education to teach in the academic area,

(II) for a comparable position with a university or institution of higher education to conduct research in the area, or

(III) for a comparable position to conduct research in the area with a department, division, or institute of a private employer, if the department, division, or institute employs at least 3 persons full-time in research activities and has achieved documented accomplishments in an academic field.

Service regulations at 8 C.F.R. 204.5(i)(3) state that a petition for an outstanding professor or researcher must be accompanied by:

(ii) Evidence that the alien has at least three years of experience in teaching and/or research in the academic field. Experience in teaching or research while working on an advanced degree will only be acceptable if the alien has acquired the degree, and if the teaching duties were such that he or she had full responsibility for the class taught or if the research conducted toward the degree has been recognized within the academic field as outstanding. Evidence of teaching and/or research experience shall be in the form of letter(s) from former or current employer(s) and shall include the name, address, and title of the writer, and a specific description of the duties performed by the alien.

This petition was filed on May 23, 2001 to classify the beneficiary as an outstanding researcher in the field of mathematical modeling and optimization. Therefore, the petitioner must establish that the beneficiary had at least three years of research experience in this field as of May 23, 2001, and that the beneficiary's work has been recognized internationally within the field of mathematical modeling and optimization as outstanding.

The director noted that the beneficiary obtained his Baccalaureate degree and Ph.D. in Chemical Engineering, not mathematical modeling or optimization. As such, the director concluded that the beneficiary did not have a degree in the academic field relating to his job offer. The director further concluded that since the beneficiary had only one year of post-graduate experience with Dash Optimization, Inc., the beneficiary did not have the three years necessary experience.

Initially, the petitioner submitted materials from Carnegie Melon University (CMU), where the beneficiary obtained his Ph.D., revealing that CMU has a Computer-Aided Process Design (CAPD) Consortium, an interdisciplinary group that includes the beneficiary's advisor, Dr. Ignacio Grossmann. The group's core systems methodologies include optimization formulations. The petitioner also submitted [REDACTED] web page, revealing that he is the head of the Chemical Engineering Program at CMU. The web page further reveals that Dr. Grossmann's primary work in the chemical engineering department focuses on "novel mathematical programming models and techniques for problems in process systems engineering," including "mixed-integer optimization." In addition, the beneficiary's Ph.D. thesis focused solely on optimization. Thus, the head of the chemical engineering program at this top level university focuses his research on optimization and this same university awarded the beneficiary a Ph.D. in chemical engineering based on his thesis work in optimization. The Service does not have the expertise to challenge these university-level determinations that optimization can fall within the academic field of chemical engineering. It remains, then, to determine whether the beneficiary's work has been recognized internationally as outstanding.

Finally, in response to the director's concern regarding the beneficiary's years of experience, counsel asserted that the petitioner was relying on the beneficiary's graduate research. As the beneficiary received his Ph.D. prior to the date of filing, that research can be considered provided it is considered outstanding in the field. The beneficiary's international recognition will be discussed below.

Service regulations at 8 C.F.R. 204.5(i)(3)(i) state that a petition for an outstanding professor or researcher must be accompanied by "[e]vidence that the professor or researcher is recognized internationally as outstanding in the academic field specified in the petition." The regulation lists six criteria, of which the petitioner must satisfy at least two. It is important to note here that the controlling purpose of the regulation is to establish international recognition, and any evidence submitted to meet these criteria must therefore be to some extent indicative of international recognition. The petitioner claims to have satisfied the following criteria.

*Documentation of the alien's receipt of major prizes or awards for outstanding achievement in the academic field*

The petitioner submits several merit awards issued by the Indian Institute of Technology and the Delhi Association of Mathematics Teachers. The awards from the association are for high marks in several National Mathematics Olympiad Contests. All of the certificates appear to be in recognition for the beneficiary's student accomplishments. Student awards for which only students compete are not major prizes or awards such that they are indicative of international recognition. As such, the beneficiary does not meet this criterion.

*Documentation of the alien's membership in associations in the academic field which require outstanding achievements of their members*

The petitioner submitted his membership card for the American Institute of Chemical Engineers (AIChE). As noted by the director, the accompanying materials indicate that members "range from undergraduate students, to entry-level engineers, to chief executive officers of major corporations." The petitioner does not submit any new materials regarding AIChE on appeal. As the petitioner has not demonstrated that AIChE membership is indicative of international recognition, we do not find that the beneficiary meets this criterion.

*Evidence of the alien's participation, either individually or on a panel, as the judge of the work of others in the same or an allied academic field*

In response to the director's request for additional documentation, the petitioner submitted evidence that the beneficiary had been requested to review manuscripts for publication in *Optimization and Engineering* and the *AIChE Journal*. The letters, however, are dated after the petitioner filed the petition. As such, they cannot be considered evidence of the beneficiary's eligibility after the date of filing. See *Matter of Katigbak*, 14 I&N Dec. 45, 49 (Comm. 1971).

*Evidence of the alien's original scientific or scholarly research contributions to the academic field*

Sharad Gupta, who oversaw the beneficiary's research at the Indian Institute of Technology, asserts that this research "involved mathematical modeling of gas permeation across membranes" and demonstrated that "the governing equations for the plug flow geometries are identical in form and can be reduced to one single general set of equations." In addition, the petitioner "identified three

dimensionless factors that can be used to completely describe the operation of a single permeation unit.” [REDACTED] does not explain how these findings have influenced other research in the field.

[REDACTED] asserts that the beneficiary focused on developing computer algorithms for optimization while a student at Carnegie Melon and had extensive interactions with industry. More specifically, [REDACTED] provides:

[The beneficiary] first considered cyclic scheduling and maintenance of parallel units with decaying performance. This is a problem that arises in ethylene plants where furnaces experience a decrease in yield due to coking. This issue was presented to us by Mitsubishi Chemicals. [The beneficiary] developed an original nonlinear mixed-integer program, which received much attention by industry and academia. He then worked in short term scheduling of a steel manufacturing plant and in two-stage processes with intermediate storage. The first case was through an interaction with MSA Pass, and the second through Unilever. In both cases, [the beneficiary] produced novel MILP models and applied them to real world case studies.

[The beneficiary] next addressed the resource-constrained problem for new produce development in which the main problem is to determine a schedule for testing of new products given constraints in the availability of labs. This was a problem that was supplied to us by Dow Agrosiences. Using a very clever graph representation combined with logic, [the beneficiary] produced a novel and effective MILP optimization model for this problem. [The beneficiary] also developed a novel method for integrating MILP and constrained logic programming (CLP). He applied this technique to a scheduling problem with parallel lines and obtained order magnitude reductions in computer time. This work has had [a] great impact on the field and has gained much publicity in the international scientific community. In fact, the software company ILOG has used this work as a success story for integrating MILP and CLP.

[REDACTED] provided similar information in a second letter, asserting that the beneficiary’s area of research is vital for the working of advanced, complex manufacturing plants.

[REDACTED] collaborator at CMU, asserts that the beneficiary demonstrated the first successful application of logic-based Benders decomposition to an industrial scheduling problem, improving the current technology. [REDACTED] continues, “Benders decomposition is one of the approaches now under investigation as a framework for combining optimization and constraint programming.” While [REDACTED] asserts that the beneficiary “has been recognized internationally for his research work,” [REDACTED] does not provide an example of that recognition.

[REDACTED] founder and CEO of Dash Optimization, Inc., asserts that the beneficiary worked for that company from October 18, 1999 to January 14, 2001, during which time he developed optimization solutions and established partnerships with chemical engineering

departments at various universities. [REDACTED] does not provide examples of any contributions made at Dash Optimization that resulted in the beneficiary's international recognition.

[REDACTED] Director of Optimization Technologies and member of the Optimization Council at the petitioning company, provides similar information to that discussed above regarding the beneficiary's graduate research. While [REDACTED] provides no discussion of the beneficiary's accomplishments at the petitioning company, we acknowledge that the beneficiary had only been working there for three months at the time [REDACTED] wrote his letter.

The above letters are all from the beneficiary's collaborators and immediate circle of colleagues. While such letters are important in providing details about the petitioner's role in various projects, they cannot by themselves establish the beneficiary's international recognition. The record, however, includes additional reference letters.

[REDACTED] Ierapetrinou, an assistant professor at Rutgers State University of New Jersey, asserts that he is familiar with the beneficiary's work through his presentations at AIChE conferences. [REDACTED] continues that the beneficiary, "was the first researcher to initiate work in the area of Integrated Mixed Integer Linear Programming and Constrained Logic Programming strategies that enable the solution of large-scale planning and scheduling problems." [REDACTED] concludes that the beneficiary is recognized internationally through his publications and collaborations with scientists all over the world, including Unilever in England and Mitsubishi in Japan. This claim is not supported by letters from Unilever or Mitsubishi.

[REDACTED] a professor at Brown University, reiterates [REDACTED] assertions regarding the beneficiary's work with logical Benders decomposition. [REDACTED] continues:

One of [the beneficiary's] most important achievements in this area has been to apply to [sic] Benders decomposition to hard scheduling problems in the chemical industry. These problems involved alternative resources and were extremely hard to solve. His seminal work in this area is published in leading journals and has brought him international recognition from the scientific community.

The above letters are from researchers in the United States. Even if the petitioner had submitted letters from Unilever and Mitsubishi, simply working on a project in collaboration with a company outside the United States is not evidence of international recognition. We do not require letters from individuals with no knowledge of the beneficiary's work; such letters would not demonstrate international recognition. In order to demonstrate international recognition, however, the record must contain evidence that international experts beyond the beneficiary's circle of colleagues are aware of his work. Otherwise, the concept of international recognition is meaningless.

The petitioner has submitted evidence that the beneficiary presented his work at several international conferences. Other than the letter from [REDACTED] Rutgers, the petitioner has not submitted any evidence that these presentations have been particularly influential, especially outside the United States. While the petitioner's research is no doubt of value, it can be argued that any research must be shown to present some benefit if it is to receive funding and attention from the scientific community. The record, however, does not establish that the petitioner's work represented a groundbreaking advance in optimization. While the petitioner's research clearly has practical applications, it can be argued that any Ph.D. thesis or published article, in order to be accepted or published, must offer new and useful information to the pool of knowledge. Overall, the record contains no evidence that the beneficiary's innovations have had a major impact on the field of optimization outside the United States beyond the beneficiary's immediate circle of international collaborators.

*Evidence of the alien's authorship of scholarly books or articles (in scholarly journals with international circulation) in the academic field*

As of the date of filing, the beneficiary had authored four published articles, including one in the *AIChE Journal*. While the petitioner submitted some information regarding the other journals in which he has been published, the only information suggesting an international circulation relates to *AIChE Journal*, described as "the global communications vehicle for the world-renowned researchers to exchange top-notch research findings with one another."

The Association of American Universities' Committee on Postdoctoral Education, on page 5 of its *Report and Recommendations*, March 31, 1998, set forth its recommended definition of a postdoctoral appointment. Among the factors included in this definition were the acknowledgement that "the appointment is viewed as preparatory for a full-time academic and/or research career," and that "the appointee has the freedom, and is expected, to publish the results of his or her research or scholarship during the period of the appointment." Thus, this national organization considers publication of one's work to be "expected," even among researchers who have not yet begun "a full-time academic and/or research career." This report reinforces the Service's position that publication of scholarly articles is not automatically evidence of international recognition; we must consider the research community's reaction to those articles.

Counsel provided a list of citations and selected excerpts from the articles that cite the beneficiary's work. This evidence reveals that one of the beneficiary's articles was cited a single time; another was cited three times; a technical report was cited three times by Dr. Hooker, including in an unpublished paper, and in an unpublished thesis; another article was cited three times; and the beneficiary's article in the *AIChE Journal* was cited eight times, two of which were in unpublished foreign theses.

While this citation history reflects that the beneficiary's work has garnered some attention beyond his collaborators and outside the United States, a maximum of eight citations for a single article does not rise to a level indicative of international recognition.

The petitioner has shown that the beneficiary is a talented and prolific researcher, who has won the respect of his collaborators, employers, and mentors, while securing some degree of international exposure for his work. The record, however, stops short of elevating the beneficiary to an international reputation as an outstanding researcher or professor. Therefore, the petitioner has not established that the beneficiary is qualified for the benefit sought.

The burden of proof in these proceedings rests solely with the petitioner. Section 291 of the Act, 8 U.S.C. 1361. The petitioner has not sustained that burden. Accordingly, the appeal will be dismissed.

**ORDER:** The appeal is dismissed.